Modified TiO$_2$ Nanoparticles Assisted Water Dissociation to Hydrogen and Oxygen

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The present work considers hydrogen generation from water to be the fuel of the future. 2-hydroxylammonium formate (Ionic liquid) synthesized from acid formic and ethanol amin. Then TiO$_2$ nano particles have been synthesized at room temperature in ionic liquid by sol-gel method. Samples calcined at 500 C. Xray diffraction (XRD) and scanning electron microscopy (SEM) Studies showed that crystalline nano particles were obtained the structure of anatase. TiO$_2$ nano particle coated on Ti electrodes of (2×1) and (1×1) and then CdS was coated on electrod. Potential study under UV irredtion in solutions of NaOH and HCl shows increase in (1×1) electrod. And potential study under UV irredtion in solution from NaCl that increase in (1×1) electrod [1-5].

REFERENCES